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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/509,578	03/28/2005	Keiji Yamada	258759US0PCT	2433
22850 7590 09/06/2007 OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER YOUNG, NATASHA E	
			ART UNIT 1709	PAPER NUMBER
			NOTIFICATION DATE 09/06/2007	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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# Office Action Summary

Application No.

10/509,578

Applicant(s)

YAMADA, KEIJI

Examiner

Natasha Young

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 28 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>See Continuation Sheet</u> . | 6) <input type="checkbox"/> Other: _____  |

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :09/29/2004, 12/22/2004, 02/16/2005, 04/27/2006, 04/26/2007.

## DETAILED ACTION

### *Specification*

The disclosure is objected to because of the following informalities: The words "PeriodicTable" should be separated on page 26, line 4.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Naruse et al (US 5,914,187) in view of Wada et al (JP 09299731).

Regarding claim 1, Naruse et al teaches a honeycomb filter for purifying exhaust gases (see Abstract and column 1, 2<sup>nd</sup> paragraph) which has a structure in which: a plurality of rectangular columnar porous ceramic members are combined with one another through a sealing material layer to constitute a ceramic block (see Abstract),

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each of the above-mentioned rectangular columnar porous ceramic member comprising a number of through holes that are placed in parallel with one another in the length direction with partition wall interposed therebetween (see figure 1); a sealing material layer is also formed on a circumference portion of said ceramic block (see Abstract); and said partition wall which separates said through holes functions as a filter for collecting particulates (see column 1, 5<sup>th</sup> paragraph).

Naruse et al does not teach on a cross section perpendicular to the length direction of said porous ceramic member of said ceramic block, the maximum width L (mm) of the crisscross portion of said sealing material layer is 1.5 to 3 times greater than the minimum width l (mm) of said sealing material layer.

The Naruse et al reference allows for ceramic members to have different sizes, form and the like (see column 9, 7<sup>th</sup> paragraph).

Wada et al teaches on a cross section perpendicular to the length direction of said porous ceramic member of said ceramic block, the maximum width L (mm) of the crisscross portion of said sealing material layer is 1.5 to 3 times greater than the minimum width l (mm) of said sealing material layer (see drawing 3 and paragraph 0019).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the teachings of Naruse et al with the teachings of Wada et al to prevent the occurrence of cracking at the intersection of the ceramic members (see Wada et al Abstract).

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Claims 2-7 depend on claim 1 such that the reasoning used to reject claim 1 will be used to reject the dependent portions of the claims.

Regarding claim 2, Naruse et al does not teach the outer circumferential face in the length direction has a curved face

The Naruse et al reference allows for ceramic members to have different sizes, form and the like (see column 9, 7th paragraph).

Wada et al teaches the outer circumferential face in the length direction has a curved face (see drawing 1).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the teachings of Naruse et al with the teachings of Wada et al to provide the largest surface area to purify exhaust gases.

Regarding claim 3, Naruse et al does not teach on a cross section perpendicular to the length direction of the porous ceramic member of the ceramic block, the maximum width L (mm) of the crisscross portion of said sealing material layer is 1.5 to 3 times greater than the minimum width I (mm) of said sealing material layer, with respect to the crisscross portions of all the sealing material layer.

Wada et al teaches on a cross section perpendicular to the length direction of the porous ceramic member of the ceramic block, the maximum width L (mm) of the crisscross portion of said sealing material layer is 1.5 to 3 times greater than the minimum width I (mm) of said sealing material layer, with respect to the crisscross portions of all the sealing material layer (see paragraph 0019 and drawing 3).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the teachings of Naruse et al with the teachings of Wada et al to prevent the occurrence of cracking at the intersection of the ceramic members (see Wada et al Abstract).

Regarding claim 4, Naruse et al teaches a catalyst is applied to the porous ceramic member (see column 7, 4<sup>th</sup> paragraph). The reference does not specifically say catalyst support film but it does teach that the catalyst is carried on the ceramic member (see column 7, 4<sup>th</sup> paragraph), which is interpreted to mean that catalyst can be in any form as long as the it is carried on the ceramic member.

Regarding claim 5, Naruse et al teaches a catalyst is applied to the porous ceramic member (see column 7, 4<sup>th</sup> paragraph).

Regarding claim 6, Naruse et al does not teach a catalyst supporting film is applied to the sealing material layer.

Naruse does teach the use of a catalyst carried of the partition walls of the honeycomb structure (see column 7, 4<sup>th</sup> paragraph).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to extend the teachings to include the sealing material layer to lower the ignition temperature of the particulates by the carrying (see column 7, 4<sup>th</sup> paragraph).

Regarding claim 7, Naruse et al does not teach a catalyst is applied to the sealing material layer.

Naruse does teach the use of a catalyst carried of the partition walls of the honeycomb structure (see column 7, 4<sup>th</sup> paragraph).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to extend the teachings to include the sealing material layer to lower the ignition temperature of the particulates by the carrying (see column 7, 4<sup>th</sup> paragraph).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Natasha Young whose telephone number is 571-270-3163. The examiner can normally be reached on Mon-Thurs 7:30am-6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Walter Griffin can be reached on 571-272-1447. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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NY

  
WALTER D. GRIFFIN  
SUPERVISORY PATENT EXAMINER